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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|----------------------------|------------------|
| 10/525,060 | 01/19/2006 | Jong-Whan Cho | 8054-95(LW8068PC/US) | 5852 |
| 22150 7590 02/23/2007 F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797 | | | EXAMINER DUDEK, JAMES A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2871 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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| 3 MONTHS | 02/23/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/525,060

Applicant(s)

CHO ET AL.

Examiner

James A. Dudek

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 20-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-9, 11-17, 20-27 is/are rejected.
- 7) ☒ Claim(s) 2, 3 and 10 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 02/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 9, 13-17, 20-21 and 23-26 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 6771327 B2 (327).

Per claims 1, 13 and 20, 327 teaches a liquid crystal display apparatus comprising: a liquid crystal display panel for displaying an image [4]; and a touch panel [3] including i) a first retardation member being disposed on an upper surface of the liquid crystal display panel [77], ii) a first transparent electrode disposed on the first retardation member [27] iii) a second transparent electrode separated from the first transparent electrode by a predetermined distance [22], iv) a second retardation member disposed on the second transparent electrode [46], and v) a first polarizing member disposed on the second retardation member [45], and the touch panel detecting a point where the first transparent electrode is electrically connected to the second transparent electrode to detect a position of an object that touches an outer surface of the touch panel [see column 1, lines 39-51, column 8, lines 2-3 and column 18, lines 22-28].

Per claims 9 and 16-17, 327 teaches third and fourth compensator on the lower substrate of the liquid crystal cell, see 65 and column 30, lines 40-43. Also, see polarizer 66.

Per claims 13-14, 327 anticipates the second retardation member disposed on the first retardation member [see half wave retarder 46 and quarter wave retarder 49].

Per claim 15, see figure 15.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over 327 in view of US 6559902 B1 (902).

327 teaches the liquid crystal display apparatus of claim 1, but lacks a spacer disposed between the first and second transparent electrodes, the spacer having a diameter from about 10 μm to about 80 μm and a height from about 2 μm to about 10 μm . However, 902 teaches spacers a diameter and height overlapping these ranges for maintaining a gap. See 902 the paragraph bridging columns 3-4. *Accordingly, it would have been obvious to one of ordinary skill at the time of invention.* Overlapping ranges are at least obvious and in this case would be obvious to maintain gap thickness and keep noise to a minimum.

Claims 5-8 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over 327.

327 teaches the liquid crystal display apparatus of claim 1, but lacks a hard coated film and an antireflection film disposed on the first polarizing member, for protecting the first polarizing member. However, it was well known to coat polarizers and use antireflection films to keep them from scratching and decrease unwanted reflecting, respectively. *Accordingly, it would have been obvious to one of ordinary skill at the time of invention.* However, the protection film needs to be hard enough to perform its job yet not so hard that it interferes with the operation of the touch panel. *Accordingly, it would have been obvious to one of ordinary skill at the time of invention* to set the hardness of the protection film to at least 3 mohs.

Art Unit: 2871

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over 327 in view of US 6570707 B1

327 lack the compensators comprising polyarylate. However, 707 teaches polyarylate compensators in LCDs because of their improved thermal expansion coefficient. *Accordingly, it would have been obvious to one of ordinary skill at the time of invention to combine the polyarylate compensators of 707 with the cell of 327.*

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over 327 in view of US 6881453 B2, US 6638582 B1, US 6097460 A, US 5926313 A and US 5550661 A.

327 lacks the compensators comprising polyether sulfone. However, US 6881453 B2, US 6638582 B1, US 6097460 A, US 5926313 A and US 5550661 A teach polyether sulfone optical retarders. *Accordingly, it would have been obvious to one of ordinary skill at the time of invention to combine the compensator of US 6881453 B2, US 6638582 B1, US 6097460 A, US 5926313 A and US 5550661 A with 327 because polyether sulfone is known to have excellent thermal stability.*

Allowable Subject Matter

Claims 2-3 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 571-272-2290. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



James A. Dudek
Primary Examiner
Art Unit 2871